COMPLETE LISTING OF THE CLAIMS
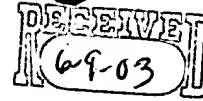
1.   (Currently Amended) A raster engine for interfacing a frame buffer in a computer system to one of a plurality of disparate display types, comprising:

at least one control register programmable via the computer system to select a display mode for one of a plurality of disparate display types and formats;

a grayscale generator operative to obtain pixel data from the frame buffer and programmable via the computer system to generate grayscale formatted data according to the selected display mode; and

a logic device having a parallel output, the logic device being adapted to select appropriate pixel data from the grayscale generator according to the selected display mode, and to provide the selected pixel data at the parallel output according to the selected display mode.

2.   (Original) The raster engine of claim 1, further comprising a grayscale look up table control register programmable by the computer system, and wherein the grayscale generator comprises a grayscale look up table programmable by the computer system using the grayscale look up table control register.

3.   (Original) The raster engine of claim 2, wherein the grayscale look up table comprises a three dimensional matrix having a frame dimension, a vertical dimension, a horizontal dimension, and a plurality of data entries associated with each combination of frame, vertical, and horizontal dimensions, and wherein the data entries comprise a plurality of matrix position enable bits adapted to indicate whether a pixel in the display is energized.

4.   (Original) The raster engine of claim 3, wherein the grayscale generator further comprises a frame counter, a vertical counter, and a horizontal counter, and wherein the grayscale look up table data entries define dithering operation for a pixel value according to the frame counter, the vertical counter, and the horizontal counter.

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5.   (Original) The raster engine of claim 4, wherein the frame dimension comprises one of 3 and 4, wherein the vertical dimension comprises one of 3 and 4, and wherein the horizontal dimension comprises one of 3 and 4.

6.   (Original) The raster engine of claim 5, wherein the grayscale generator is adapted to translate 3 bits of pixel data for a pixel in the display to generate grayscale formatted data for the pixel to provide 8 shades of gray according to the selected display mode and the grayscale lookup table data entries.

7.   (Original) The raster engine of claim 3, wherein the frame dimension comprises one of 3 and 4, wherein the vertical dimension comprises one of 3 and 4, and wherein the horizontal dimension comprises one of 3 and 4.

8.   (Original) The raster engine of claim 1, wherein the grayscale generator is adapted to translate 3 bits of pixel data for a pixel in the display to generate grayscale formatted data for the pixel to provide 8 shades of gray according to the selected display mode.

9.   (Original) The raster engine of claim 1, wherein the grayscale generator comprises a frame counter, a vertical counter, and a horizontal counter.

10.   (Original) The raster engine of claim 6, wherein the grayscale generator is programmable by a user via an application program in the computer system.

11.   (Original) The raster engine of claim 10, wherein the application program is a video driver.

12.   (Original) The raster engine of claim 1, wherein the grayscale generator is programmable by a user via an application program in the computer system.

13.   (Original) The raster engine of claim 6, wherein the display type is one of a monochrome display, a liquid crystal display, and an electro-luminescent display.

14.   (Original) The raster engine of claim 1, wherein the display type is one of a monochrome display, a liquid crystal display, and an electro-luminescent display.

15.   (Original) A grayscale generator operatively associated with a raster engine to generate grayscale formatted data according to a selected display mode, comprising:

a grayscale look up table control register programmable by a computer system; and

a grayscale look up table programmable by the computer system using the grayscale look up table control register.

16.   (Original) The grayscale generator of claim 15, wherein the grayscale look up table comprises a three dimensional matrix having a frame dimension, a vertical dimension, a horizontal dimension, and a plurality of data entries associated with each combination of frame, vertical, and horizontal dimensions, and wherein the data entries comprise a plurality of matrix position enable bits adapted to indicate whether a pixel in a display is energized.

17.   (Original) The grayscale generator of claim 16, further comprising a frame counter, a vertical counter, and a horizontal counter, and wherein the grayscale look up table data entries define dithering operation for a pixel value according to the frame counter, the vertical counter, and the horizontal counter.

18.   (Original) The grayscale generator of claim 17, wherein the frame dimension comprises one of 3 and 4, wherein the vertical dimension comprises one of 3 and 4, and wherein the horizontal dimension comprises one of 3 and 4.

19.   (Original) The grayscale generator of claim 18, wherein the grayscale generator is adapted to translate 3 bits of pixel data for a pixel in the display to generate grayscale formatted data for the pixel to provide 8 shades of gray according to the selected display mode and the

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grayscale lookup table data entries.

20.   (Original) The grayscale generator of claim 16, wherein the frame dimension comprises one of 3 and 4, wherein the vertical dimension comprises one of 3 and 4, and wherein the horizontal dimension comprises one of 3 and 4.

21.   (Original) The grayscale generator of claim 15, wherein the grayscale generator is adapted to translate 3 bits of pixel data for a pixel in a display to generate grayscale formatted data for the pixel to provide 8 shades of gray according to the selected display mode.

22.   (Original) A raster engine for interfacing a frame buffer in a computer system to one of a plurality of disparate display types, comprising:

means for selecting a display mode;

means for obtaining pixel data from the frame buffer and programmable via the computer system to generate grayscale formatted data according to the selected display mode; and

parallel output means for selecting appropriate pixel data from the means for obtaining pixel data according to the selected display mode, and for providing the selected pixel data at a parallel output according to the selected display mode.

23.   (Original) The raster engine of claim 22, further comprising a grayscale look up table control register programmable by the computer system, and wherein the means for obtaining pixel data comprises a grayscale look up table programmable by the computer system using the grayscale look up table control register.

24.   (Original) The raster engine of claim 23, wherein the grayscale look up table comprises a three dimensional matrix having a frame dimension, a vertical dimension, a horizontal dimension, and a plurality of data entries associated with each combination of frame, vertical, and horizontal dimensions, and wherein the data entries comprise a plurality of matrix position enable bits adapted to indicate whether a pixel in the display is energized.

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25.   (Original) The raster engine of claim 24, wherein the means for obtaining pixel data further comprises a frame counter, a vertical counter, and a horizontal counter, and wherein the grayscale look up table data entries define dithering operation for a pixel value according to the frame counter, the vertical counter, and the horizontal counter.

26.   (Original) The raster engine of claim 25, wherein the means for obtaining pixel data is adapted to translate 3 bits of pixel data for a pixel in the display to generate grayscale formatted data for the pixel to provide 8 shades of gray according to the selected display mode and the grayscale lookup table data entries.

27.   (Original) The raster engine of claim 24, wherein the frame dimension comprises one of 3 and 4, wherein the vertical dimension comprises one of 3 and 4, and wherein the horizontal dimension comprises one of 3 and 4.